Monitoring Well Installation SWMUs 25 and 26

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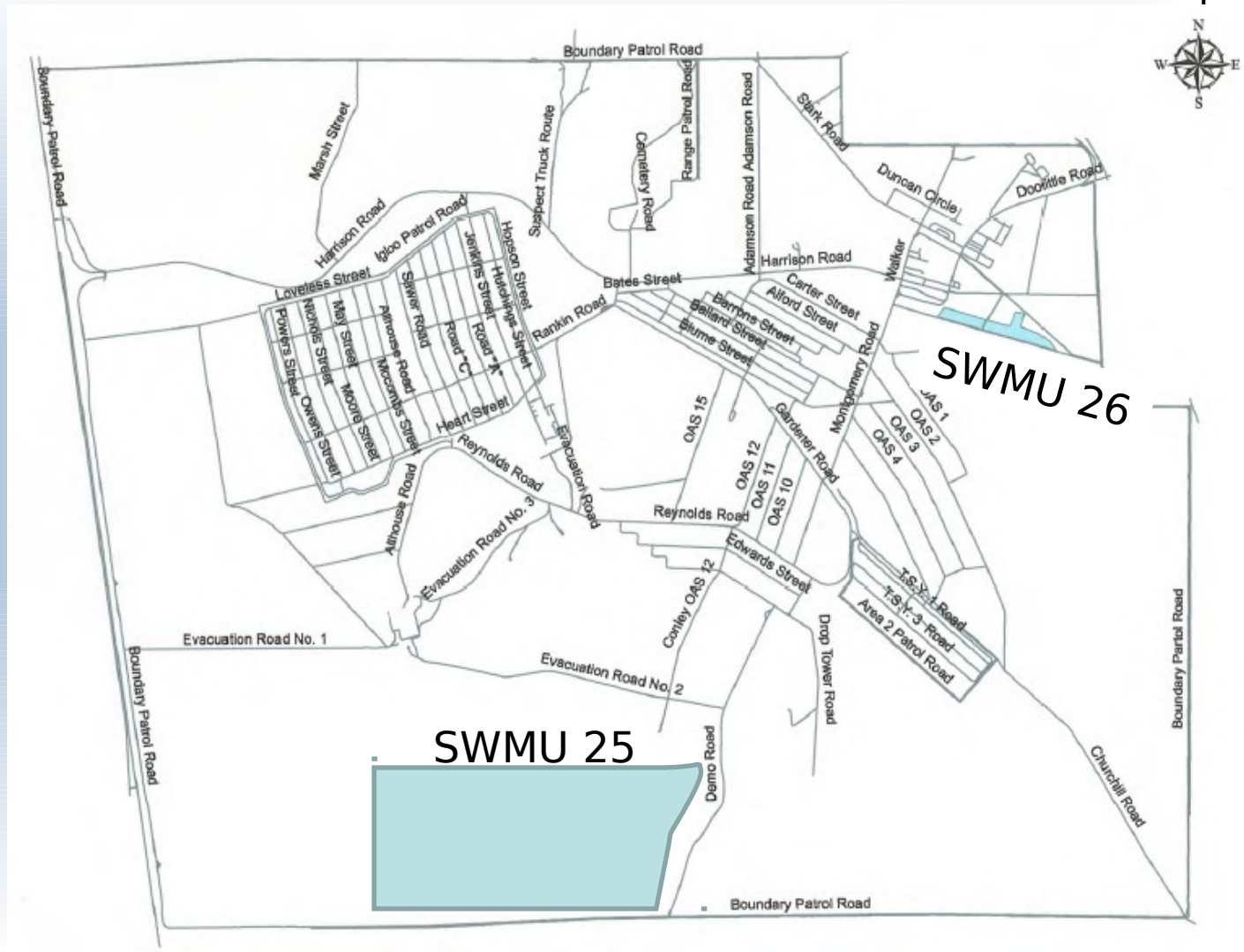
Field Work Objectives

- **Install 2 groundwater monitoring wells to define the extent of the 1,1,1-TCA plume at SWMU 26**
  - Total depth of wells ~300 feet
  - Test for volatile compounds in newly installed wells
- **Install 2 groundwater monitoring wells to define the extent of the carbon tet and chloroform plume at SWMU 25**
  - Total depth of wells ~50-60 feet
  - Analyze total organic carbon above and below the water table

SWMU 26 Background

Sanitary landfill

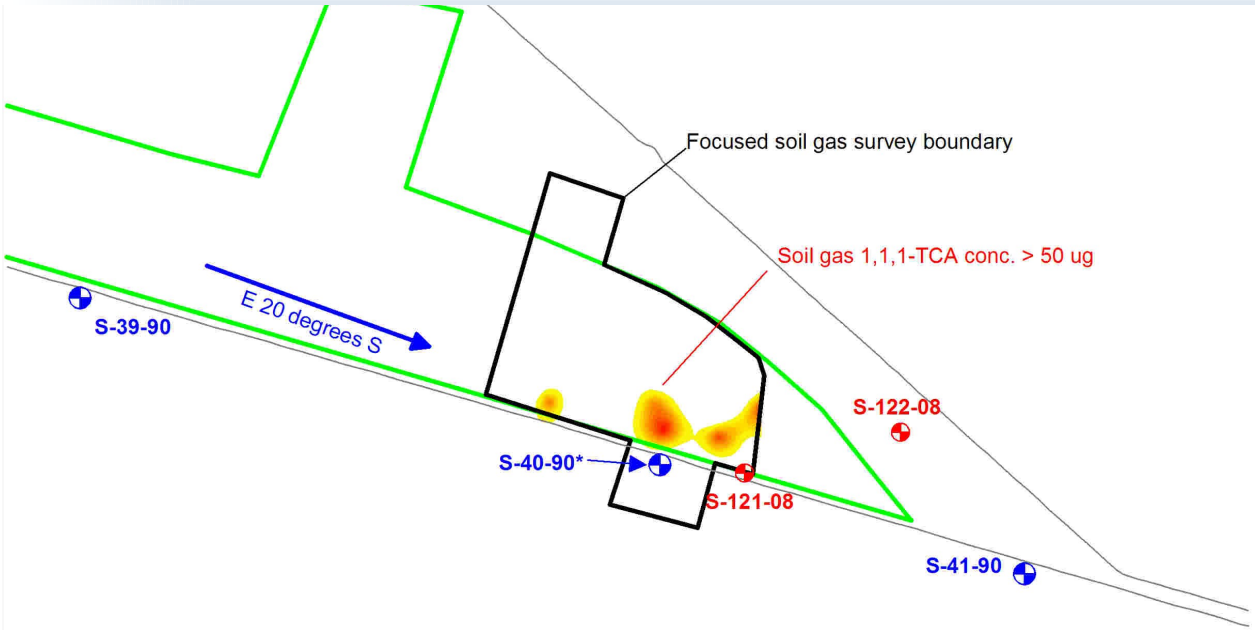
- Historic detections of 1,1,1,-TCA and 1,2-DCA in groundwater
- Soil gas survey indicated TCA, DCA, TCE, and DCE in surface soils



SWMU 26 Background

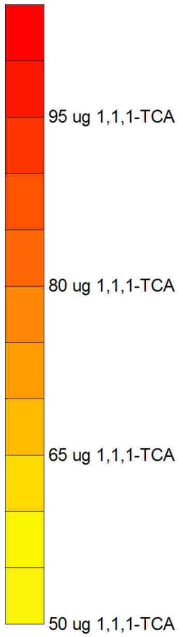
- **Refine definition of volatile organic compound (VOC) source in SWMU 26 groundwater**
  - Large area soil gas survey in 2006
  - Refined area soil gas survey in 2007
  - Geophyiscal survey to locate anomalies (e.g. drums) in 2007
  - Installed 2 groundwater wells based on these studies and concurrence from UDEQ and USACE.

SWMU 26

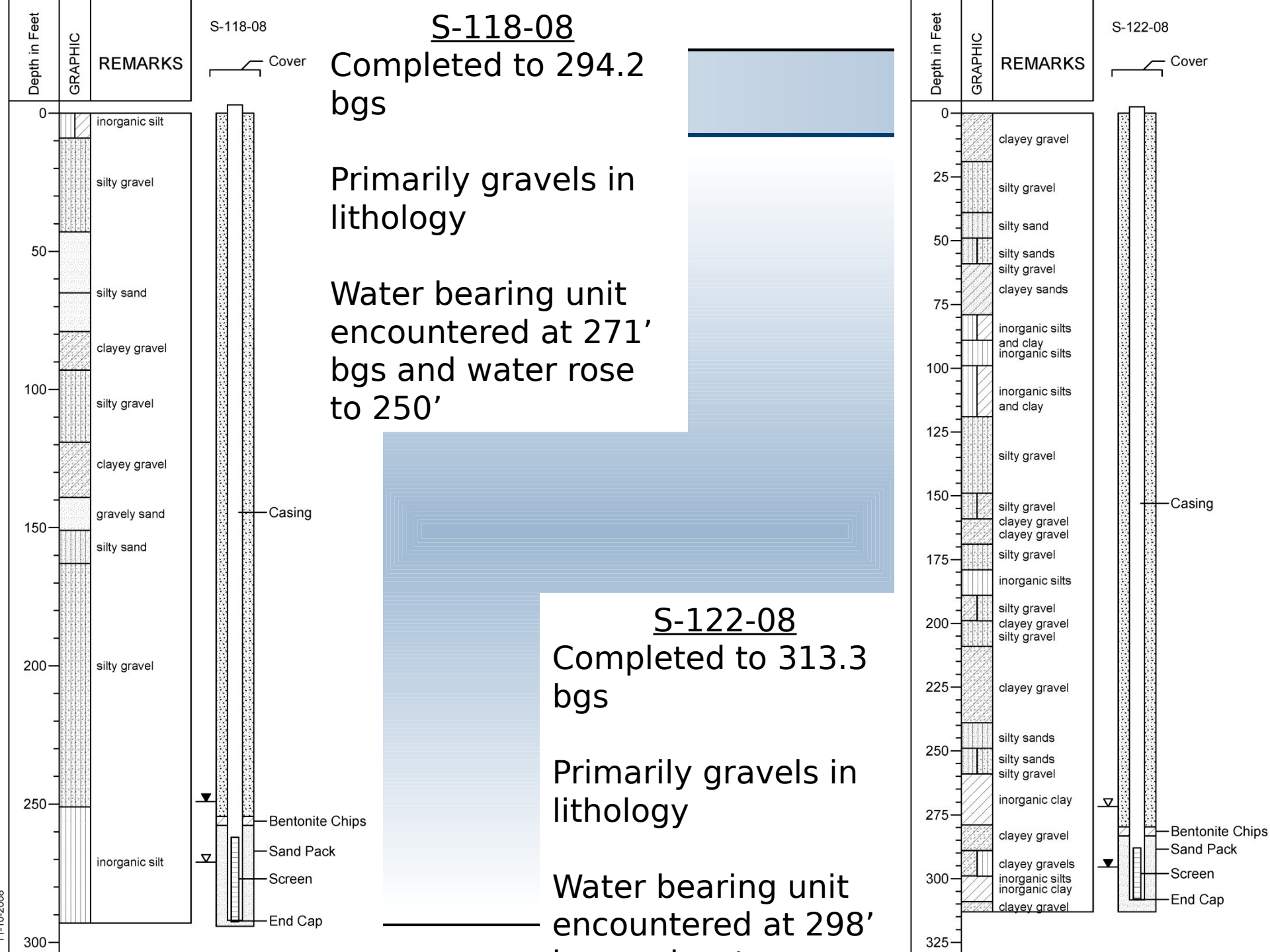


*Only existing well with 1,1,1-TCA detections.
1st detection of 9 ug/L occurred in 1999.

VOC concentration key:

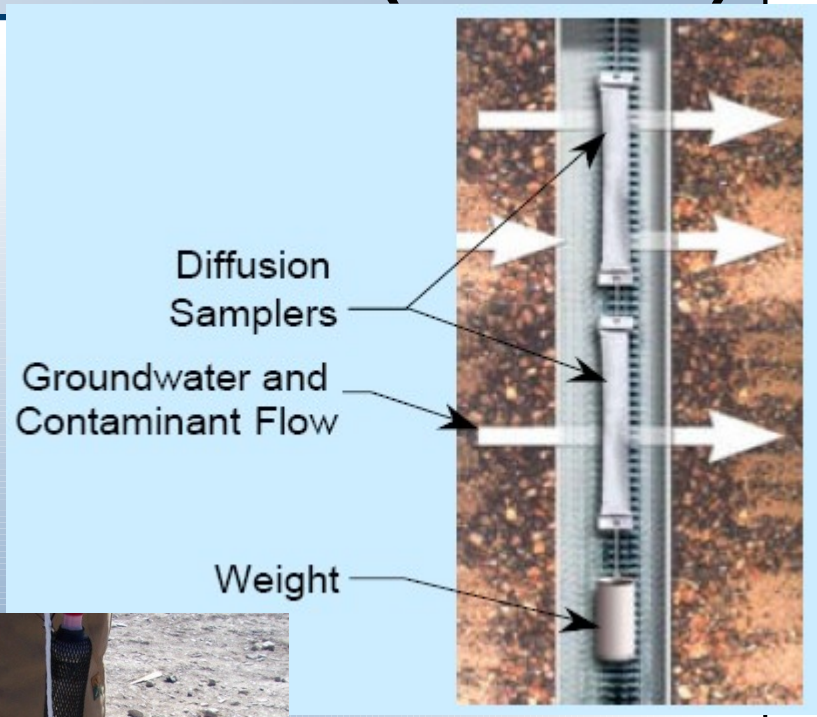


Concentration of detected compound in micrograms per sorber


S-118-08
Completed to 294.2 bgs
Primarily gravels in lithology
Water bearing unit encountered at 271’ bgs and water rose to 250’
S-122-08
Completed to 313.3 bgs
Primarily gravels in lithology
Water bearing unit encountered at 298’
Depth in Feet
GRAPHIC
REMARKS
S-118-08
Cover
inorganic silt
silty gravel
silty sand
clayey gravel
silty gravel
clayey gravel
gravely sand
silty sand
silty gravel
inorganic silt
Casing
Bentonite Chips
Sand Pack
Screen
End Cap
0
50
100
150
200
250
300
S-122-08
clayey gravel
silty gravel
silty sand
silty sands
silty gravel
clayey sands
inorganic silts and clay
inorganic silts
inorganic silts and clay
silty gravel
silty gravel
clayey gravel
clayey gravel
silty gravel
inorganic silts
silty gravel
clayey gravel
silty gravel
clayey gravel
silty sands
silty sands
silty gravel
inorganic clay
clayey gravel
clayey gravels
inorganic silts
inorganic clay
clayey gravel
0
25
50
75
100
125
150
175
200
225
250
275
300
325

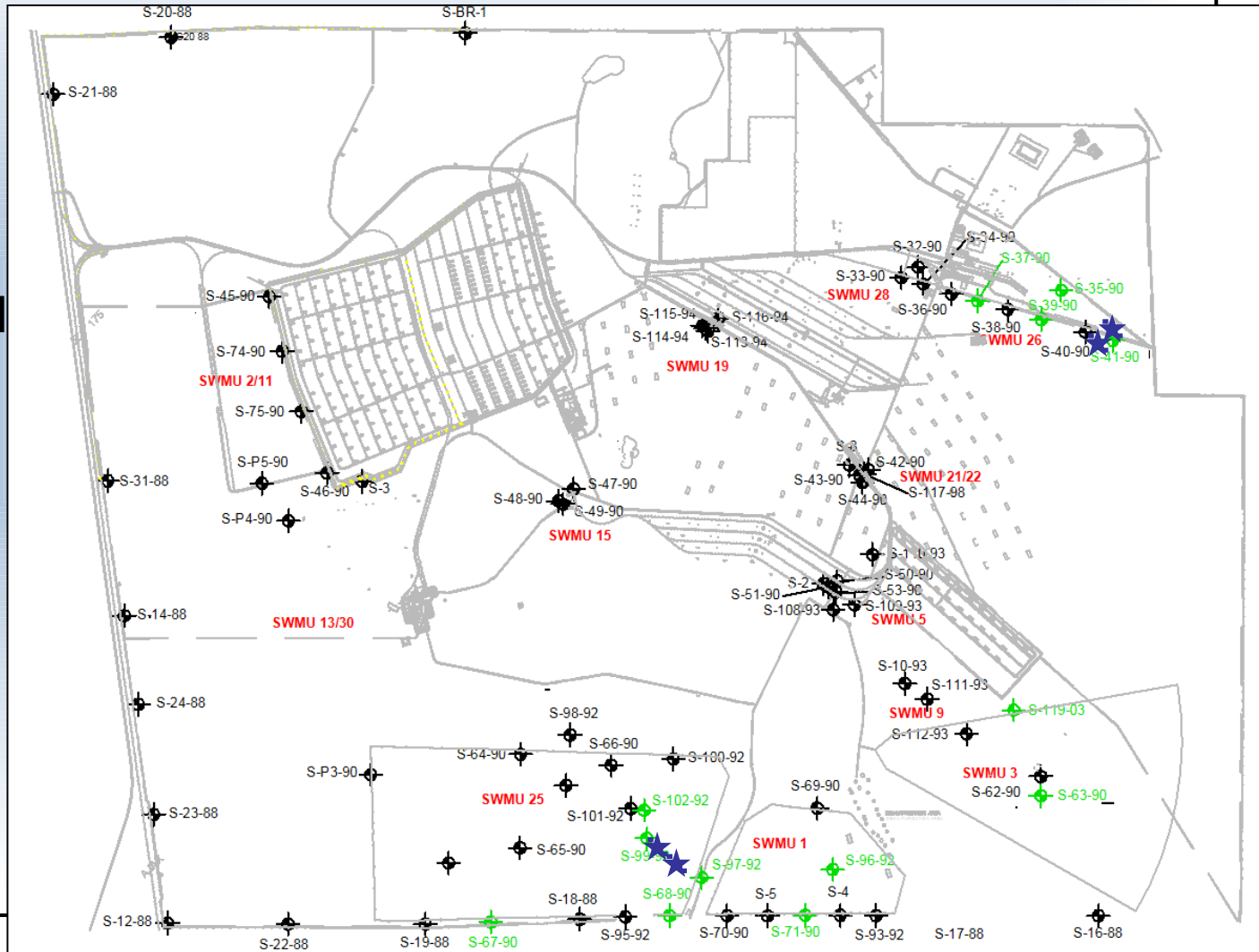
SWMU 26 Activities (cont.)

- **Passive Diffusion Bag (PDB) Samplers**
  - LDPE bag filled with DI water
  - Deployed in groundwater well for 2 weeks
  - Volatile compounds only
  - No well purging required and minimal waste generated
  - May be more representative of concentrations in the groundwater

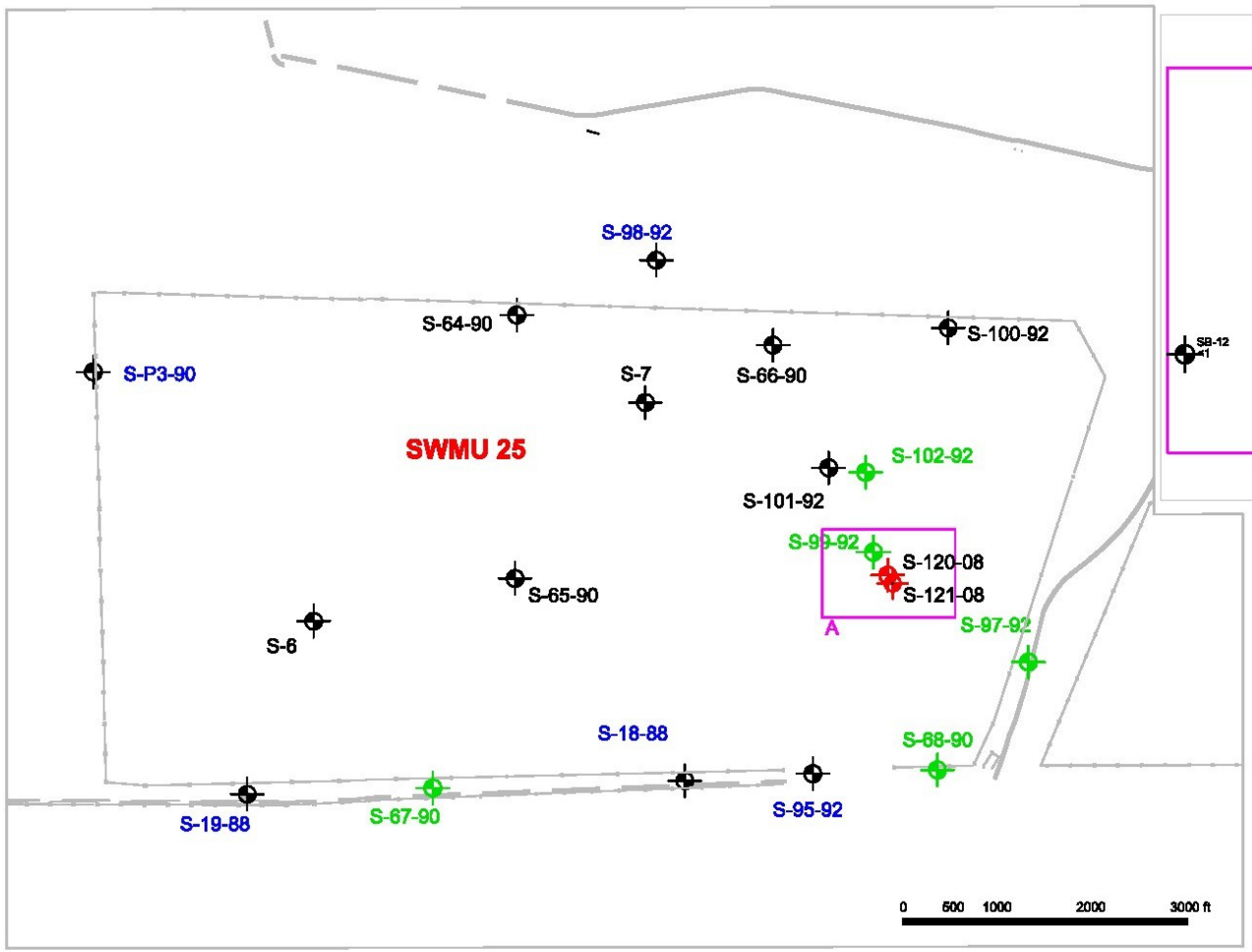


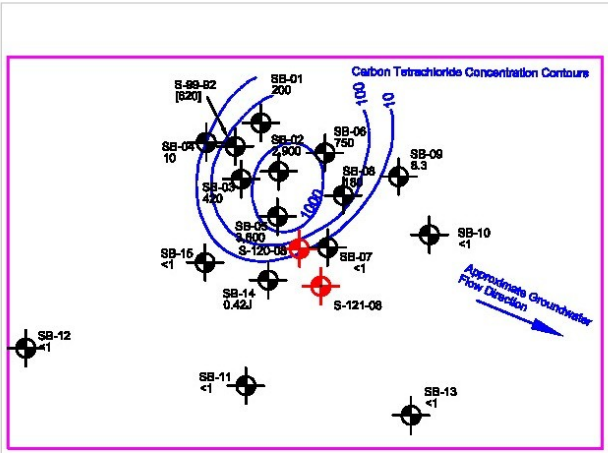
SWMU 25 Background

- **Demilitarization Area**
  - High-explosive detonation craters, windrows of munition parts
  - Disposal pits
  - Ash piles
  - Historic detections of carbon tet and chloroform



SWMU 25 Activities





Detail A

N
W
E
S

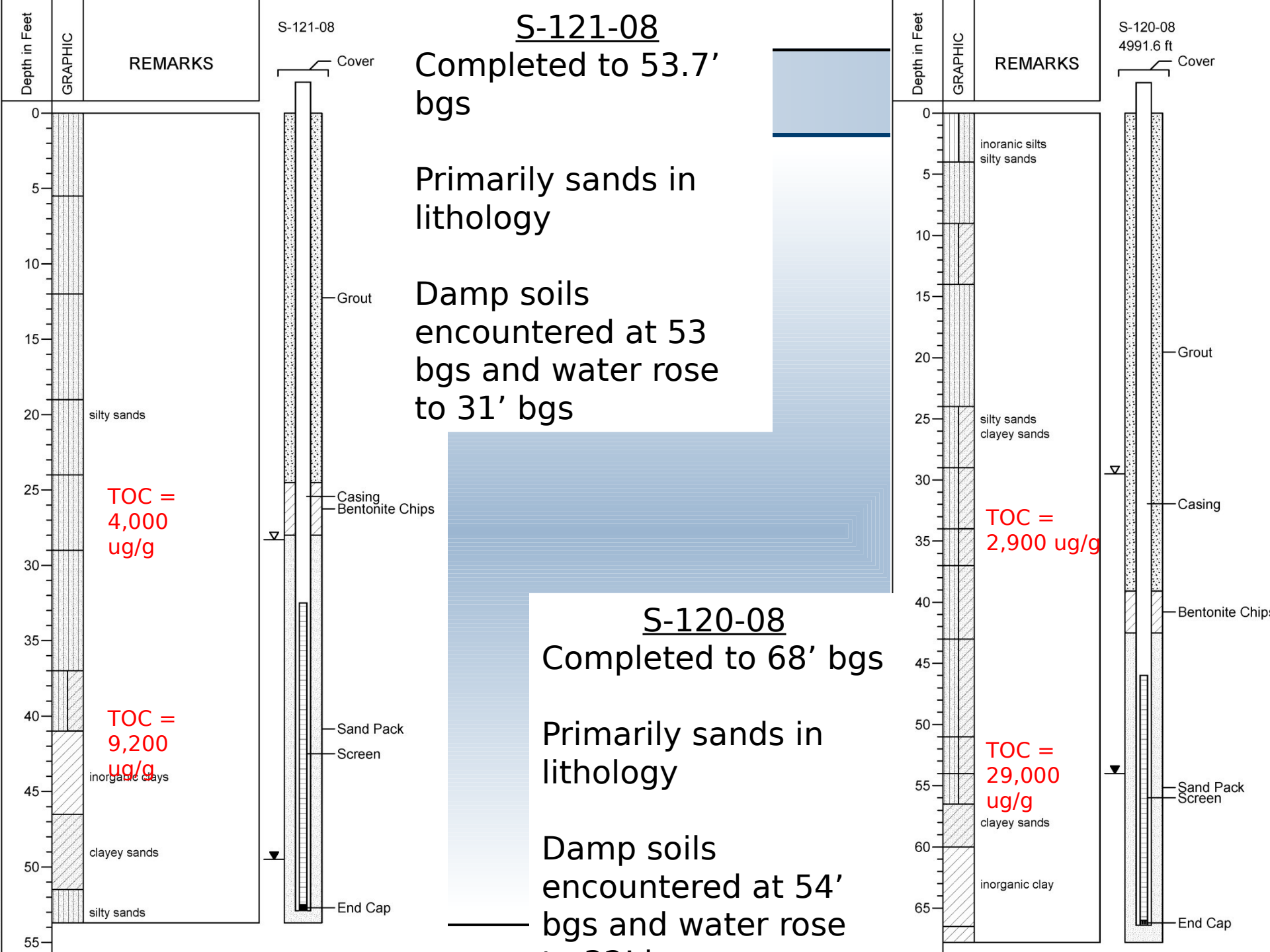
Legend

S-69-92 Existing Well

S-98-92 Well Measured for depth to Water

S-68-90 Well Sample and Measure for Depth of Water

2008 New Wells


S-121-08
Completed to 53.7’ bgs
Primarily sands in lithology
Damp soils encountered at 53 bgs and water rose to 31’ bgs
S-120-08
Completed to 68’ bgs
Primarily sands in lithology
Damp soils encountered at 54’ bgs and water rose
Depth in Feet
GRAPHIC
REMARKS
S-121-08
Cover
Grout
Casing
Bentonite Chips
Sand Pack
Screen
End Cap
silty sands
inorganic clays
clayey sands
silty sands
TOC = 4,000 ug/g
TOC = 9,200 ug/g
S-120-08
4991.6 ft
inoranic silts
silty sands
silty sands
clayey sands
clayey sands
inorganic clay
TOC = 2,900 ug/g
TOC = 29,000 ug/g

North Wind

Thank you,

and

Questions?